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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/617,068	07/16/2000	Thomas Schwalbe	CELL0017	7221

7590 10/11/2005

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EXAMINER

LEVKOVICH, NATALIA A

ART UNIT PAPER NUMBER

1743

DATE MAILED: 10/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/617,068

Applicant(s)

SCHWALBE ET AL.

Examiner

Natalia Levkovich

Art Unit

1743

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 June 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) 20-27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 July 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/Q8)
- Paper No(s)/Mail Date 9/1/03; 12/12/01;

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Art Unit: 1743

DETAILED ACTION

Response to Election

1. Applicant's election without traverse dated 06/07/2005 have been acknowledged by the Examiner and entered. Claims 20-27 have been canceled and claims 1-19 are pending in the instant application for consideration.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 7-8 and 19 are rejected under 35 U.S.C. 112, second paragraph, as being unclear for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 7-8 and 19 recite "heat exchanger being coupled in fluid communication with the reaction module". The term 'fluid communication' is unclear in the given context since, as is well known in the art, heat exchangers transfer heat energy from one fluid (or gas) to another fluid (or gas) without mixing the two.

Art Unit: 1743

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 1-6, 9, 11-16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rosenberg et al. (WO009300625).

Rosenberg discloses an automated synthesizer comprising : multiple reservoirs for holding different reactants ['first reactant supply'-Ex.]; multiple reservoirs for holding different solvents ['solvent supply'-Ex.]; additional reservoirs for holding additional reactants ['second reactant supply'-Ex.]; a reaction chamber; a "delivery valve" for "selectively delivering each reactant or solvent" ['first supply valve'-Ex.] to the reaction chamber; a "directional flow valve" coupled to the reactor outlet ['output valve'-Ex.]; "liquid flow control means" [pumps-Ex.]; a recycling reservoir ['spent solvent reservoir'-Ex.]; a control means [computer-Ex.] 'controllably connected' to the above elements

Art Unit: 1743

and monitoring the synthesis process (See Page 4, lines 5-35; Page 5, lines 5-35; Page 6, line 35).

With respect to claims 1 and 15, Rosenberg does not teach a product collector 'comprising a plurality of separate volumes', however, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have employed a product collector designed in the same manner as reactant / solvent supplies (that is, having multiple reservoirs), in the modified apparatus of Rosenberg, in order to provide selectivity to the process of product collection.

Referring to claims 6 and 18, Rosenberg does not specifically teach a detector located between the reaction chamber and the output valve, however, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have placed a detector at the reactor outlet, in the modified apparatus of Rosenberg, in order to control the process of product formation.

As to claim 11, although Rosenberg does not teach the reactor to be a micro-reactor, however, micro-reactors are widely used for bio synthesis, and , it would have been obvious to one of ordinary skill in the art at the time the invention was made to have employed a micro-reactor in the modified apparatus of Rosenberg, in order to create libraries of substances using small amounts of reagents.

7. Claims 10 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over y Rosenberg et al. (WO009300625) in view of Joslyn (US 6656423).

Rosenberg does not teach a residence time chamber, however, residence time

Art Unit: 1743

Chambers are routinely used in the art (See, for example, the Joslyn reference, column 6, lines 40-50). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have employed a residence chamber in the modified apparatus of Rosenberg, in order to control the reaction time.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Su et al.(US 5468643) teaches a switching valve system for directing biological sample flow.

Manz (US 5250263) discloses an apparatus for processing or preparing liquid samples for chemical analysis.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Natalia Levkovich whose telephone number is 571-272-2462. The examiner can normally be reached on Mon-Fri, 8 a.m.-4p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1743

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



LYLE A. ALEXANDER
PRIMARY EXAMINER